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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,211	01/31/2002	Mikito Iwamasa	219053US2SRD	6031

22850 7590 03/06/2006

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EXAMINER

MITCHELL, JASON D

ART UNIT PAPER NUMBER

2193

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/059,211

Applicant(s)

IWAMASA, MIKITO

Examiner

Jason Mitchell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to remarks filed on 12/09/05 and claims priority to Japanese patent application 2001-024491 filed on 1/31/01. For this claim to be perfected, an English translation must be submitted.

At Applicant's request claims 1, 5, 8, 12-13, 15, and 17 have been amended. Claims 1-18 are pending in this application.

Response to Arguments

It is noted that Examiner incorrectly rejected claim 14 under 35 USC 112 2nd as lacking antecedent basis. This rejection was intended for claim 13, however as noted below, applicant's amendments have corrected the issue.

Applicant's replacement drawings are sufficient to overcome the objections to figures 1 and 11. Consequently the objections are withdrawn.

Applicant's arguments on pg. 12 regarding the objection to the oath/declaration have been fully considered and are persuasive. Consequently the objection is withdrawn.

Applicant's amendments to claims 5, 12 and 13 are sufficient to overcome the 35 USC 112 2nd rejections of those claims. Consequently the corresponding rejections have been withdrawn.

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It is noted that **Claim 6 has not been amended**, accordingly the rejection to that claim is maintained. However this appears to be a simple clerical error and the claim will be treated as reciting limitations similar to those of claim 13.

Applicant's arguments on pp. 12-14 regarding the 35 USC 103(a) rejection of claims 1, 8, 15 and 17 have been fully considered but are not persuasive.

In the last full paragraph on pg. 13, Applicant states:

In contrast, in Claim 1, the first system specification described in a state transition table form and the second system specification described in an execution control table form, are different. In a non-limiting illustration exemplified in Figs. 4 and 8, the first system specification described in a state transition table form uses a "(current) state" as the primary key², whereas the second system specification described in an execution control table form uses a "(current) program" as the primary key³. Thus, there is not a one to one relationship between the "(current) state" and the "(current) program". This non-limiting illustration exemplifies that the first system specification (described in a state transition table form) and the second system specification (described in an execution control table form), recited in Claim 1, are not substantially the same, unlike the state transition table and state transition generation class 102 of Matsutsuka, which are substantially the same. (emphasis in original)

Examiner respectfully disagrees. First, the claim language does not require that the first system specification and the second system specification not be "substantially the same", and although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)

Further, Applicant's figs. 4 and 8 clearly show a one-to-one relationship (see for example the "Transition" column of Fig. 8).

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Given this rationale and the rejections below and of record, it is apparent that Matsutsuka does in fact anticipate the claimed limitations and consequently the rejection is maintained.

In the paragraph bridging pp. 12 and 13 Applicant states:

Further Matsutsuka does not describe or suggest that a new processing content unit is added to any one of the program state transition units in consideration of the continuity of transitions in said state transition table, as is described in Claim 1. Thus, Matsutsuka's state transition table does not describe the second system specification described in Claim 1.
(emphasis in original)

Examiner respectfully disagrees. As indicated below in the rejection of the appropriate claims, Matsutsuka discloses an 'event process class 104' which provides the claimed functionality.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 recites the limitations "the first rule" and "the second rule". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,211,872 to Matsutsuka et al. (Matsutsuka).

Regarding Claims 1 and 8: Matsutsuka discloses a system design support method comprising: generating a first system specification described in a state transition table form (col. 2, lines 42-46 'State transition definition table 101') using a state transition unit which includes information relating to an execution control over the system (col. 2, lines 42-46 'an action name for each event name'); generating a second system specification described in an execution control table form (col. 2, lines 50-53 'the state transition table') which includes a set of program state transition units indicating how processing content units are switched upon state transitions (col. 2, line 66 – col. 3, line 1 'event process class 104 executes processing of each event corresponding to action name'), wherein a new processing content unit is added to any one of the program state transition units in consideration of the continuity of transitions in said state transition table (col. 2, line 66 – col. 3, line 1 'processing of each event corresponding to action name'); and converting the second system specification described in an execution control table form to a third system specification having an executable form (col. 5, lines 19-21 'Event process class 207').

Matsutsuka does not explicitly disclose the third system specification being described in a system description language. However as noted in Applicant's specification such languages were known in the art (pg. 22, lines 5-8 'SpecC is available') and would have

been an obvious choice for the representation of Matsutsuka's third system specification ('Event process class 207') because one of ordinary skill would have been motivated to make use of SpecC's ability to describe parallel processing (Matsutsuka col. 4, lines 26-27 'makes possible parallel processing').

Regarding Claims 2 and 9: The rejections of claims 1 and 8 are incorporated, respectively; further Matsutsuka discloses each of the state transition units includes at least a current state taken by the system, an event serving as a cause of the state transition, and a next state taken by the system upon occurrence of a state transition (Fig. 9, State Name, Event and Transition Destination).

Regarding Claims 3 and 10: The rejections of claims 2 and 8 are incorporated, respectively; further Matsutsuka discloses the state transition unit further includes a condition that allows a state to make a transition, and an action to be executed before a transition to a next state (Fig. 9 Event and Execute Routine).

Regarding Claims 5 and 12: The rejections of claims 1 and 8 are incorporated, respectively; further Matsutsuka discloses program state transition units each include at least a transition that has occurred (Fig. 9, Event), a current program (Fig. 9, Execute Routine), a type of execution control to the current program (Fig. 9, Execute Routine i.e. Initialization, Execute, Cancel), and a program to be executed next (Fig. 9 Transition Destination), inherently disclosing a type of execution control to the program to be executed next (Fig. 9, Execute Routine i.e. Initialization, Execute, Cancel).

Regarding Claims 6 and 13: The rejections of claims 1 and 8 are incorporated, respectively; further Matsutsuka discloses the converting comprises expanding the

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program state transition units to a specification described in the system description language (col. 5, lines 19-21 'Event process class 207') in accordance with the first rule (col. 5, lines 19-21 'Event process class 207 is partially automatically generated'); and integrating the expanded specification in accordance with the second rule (col. 6, lines 20-22 'converts a network event ... to a suitable event process class 207 method').

Regarding Claims 7 and 14: The rejections of claims 6 and 8 are incorporated, respectively; further while Matsutsuka does not explicitly disclose the use of a specification description language based on C, as indicated in Applicant's specification (pg. 22, lines 5-8 'SpecC is available') such languages were known in the art and would have been an obvious choice of system specification languages.

Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,211,872 to Matsutsuka et al. (Matsutsuka) in view of US 2002/0104071 to Charisius et al. (Charisius).

Regarding Claims 4 and 11: The rejections of claims 1 and 8 are incorporated, respectively; further Matsutsuka discloses the information relating to the execution control includes a program of which an execution control is triggered in association with the state transition (Fig. 9, Execute Routine); and notification of an event which notifies that processing is ended (col. 15 lines 8-11 'executes completion processing ... indicating completion'). Further, while Matsutsuka does not explicitly disclose the types of execution control claimed, Matsutsuka does disclose a type of execution control (col.

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15, lines 18-20 'issues ... a "exitMethod (ExitData)" method for directing the execution of process completion').

Charisius teaches types of execution control over a program (par. [0232] 'a group of commands that control the execution'), the type of an execution control includes at least a start of the system (par. [0232] "Run"), a forced termination of processing based on an interrupt caused by occurrence of an event (par. [0232] "Stop"), a pause of processing based on an interrupt caused by occurrence of an event (par. [0232] "Pause"), and a resume from the pause of processing based on an interrupt (par. [0232] "Continue") in the analogous art of software development (par. [0232] 'software development tool'), for the purpose of controlling execution of a program (par. [0232] 'a group of commands that control the execution').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to replace Matsutsuka's execution control (col. 15, lines 18-20) with Charisius's execution control methods (par. [0232]) because one of ordinary skill in the art would have been motivated to provide more complete control over the program's execution (Charisius par. [0232] 'control the execution of the ... client program')

Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,211,872 to Matsutsuka et al. (Matsutsuka) in view of "OMG Unified Modeling Language Specification" (UML).

Regarding Claims 15 and 17: Matsutsuka discloses a design support system comprising: generating a first system specification described in a state transition table

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form using a state transition unit (col. 2, lines 42-46 'State transition definition table 101') which includes information relating to an execution control over the system; generating a second system specification described in an execution control table form which includes a set of program state transition units indicating how processing content units are switched upon state transitions (col. 2, line 66 – col. 3, line 1 'event process class 104 executes processing of each event corresponding to action name'), wherein a new processing content unit is added to any one of the program state transition units in consideration of the continuity of transitions in said state transition table (col. 2, line 66 – col. 3, line 1 'processing of each event corresponding to action name') based on the first system; and converting the second system specification described in an execution control table form to a third system specification having an executable form (col. 5, lines 19-21 'Event process class 207').

While Matsutsuka does not explicitly disclose creating a system specification model comprised of a specification of a computation and a specification of a communication at a system level; dividing and distributing partial structures of the system specification model into partial elements of a predetermined architecture to create an architecture model; combining communication protocols between the partial elements of the architecture based on the specification of the communication to create a communication model; associating the system specification model, the architecture model, and the communication model with each other, and recording the associated model as a system specification; generating a hardware specification from the system specification; generating a software specification from the system specification;

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However, as taught by UML (pg. 1-2, section 1.2.2) such specification systems were known in the art at the time of the invention and it would have been obvious to one of skill in the art to use a modeling system similar to UML as an initial design tool in Matsutsuka's system (UML pg. 1-3 section 1.3.1).

Further, Matsutsuka does not explicitly disclose the third system specification being described in a system description language. However as noted in Applicant's specification such languages were known in the art (pg. 22, lines 5-8 'SpecC is available') and would have been an obvious choice for the representation of Matsutsuka's third system specification ('Event process class 207') because one of ordinary skill would have been motivated to make use of SpecC's ability to describe parallel processing (Matsutsuka col. 4, lines 26-27 'makes possible parallel processing').

Regarding Claims 16 and 18: The rejections of claims 15 and 17 are incorporated, respectively; further Matsutsuka discloses forming a system specification model component in order to reuse the component in creating the system specification model, architecture model, and the communication model (col. 3, lines 45-51 'this configuration renders unnecessary server-side program changes ... facilitates the reuse of physical screens').

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Mitchell
3/01/06



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